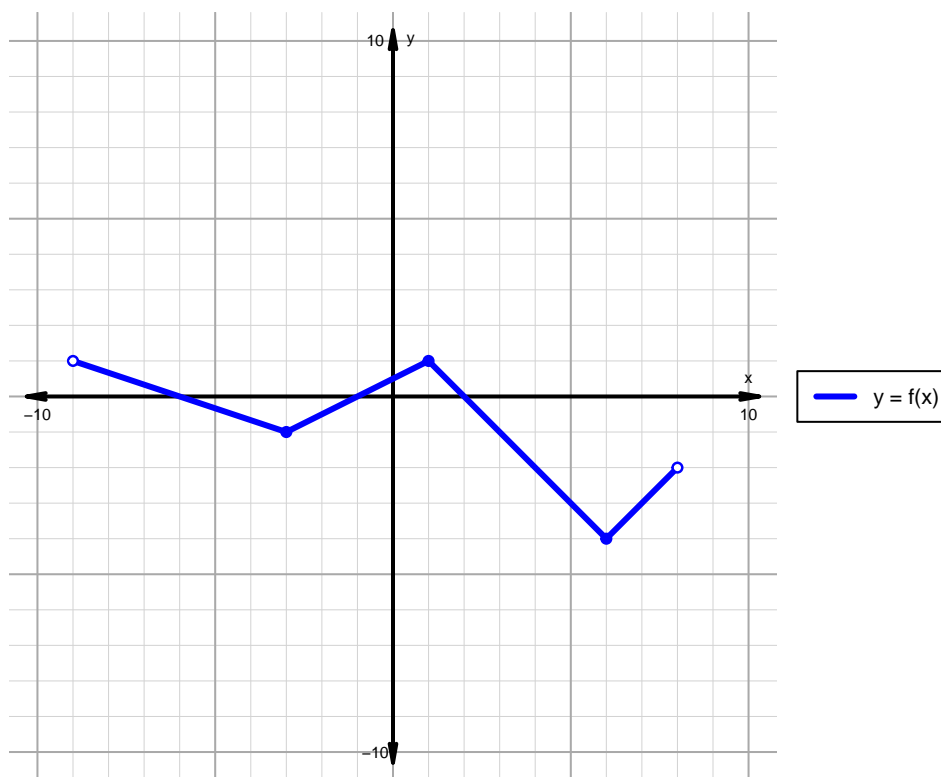


Name: \_\_\_\_\_

Date: \_\_\_\_\_

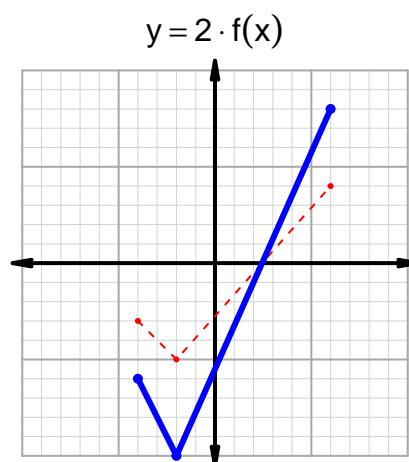
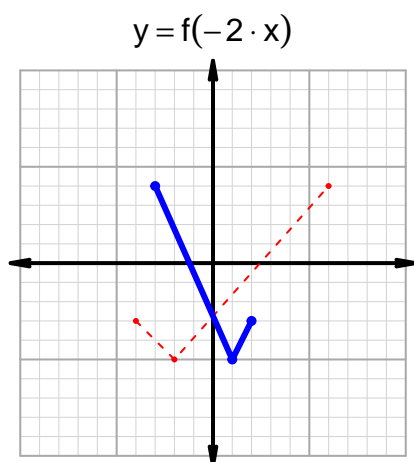
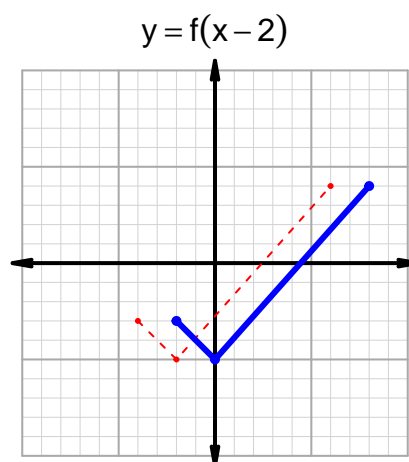
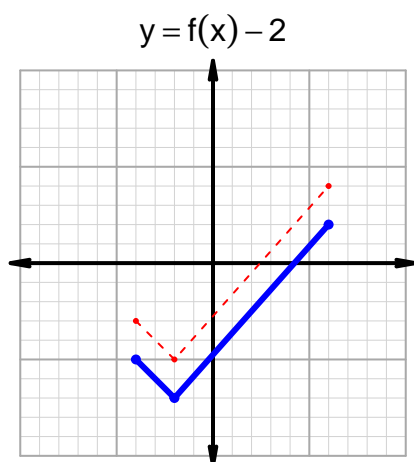
**Intervals, Transformations, and Slope Solution (version 94)**1. The function  $f$  is graphed below.

Indicate the following intervals using interval notation. Remember, you can use  $\cup$  between two intervals to indicate the union. Except for range, all intervals will indicate  $x$  values; this is standard.

Feature	Where
Positive	$(-9, -6) \cup (-1, 2)$
Negative	$(-6, -1) \cup (2, 8)$
Increasing	$(-3, 1) \cup (6, 8)$
Decreasing	$(-9, -3) \cup (1, 6)$
Domain	$(-9, 8)$
Range	$(-4, 1)$

## Intervals, Transformations, and Slope Solution (version 94)

2. In the four graphs below,  $y = f(x)$  is graphed as a dotted line. With a solid line, please graph the transformations indicated by the equations below.



3. Let function  $g$  be defined by the table below. Use the formula  $\frac{g(x_2) - g(x_1)}{x_2 - x_1}$  to find the average rate of change between  $x_1 = 35$  and  $x_2 = 60$ . Express your answer as a reduced fraction.

$x$	$g(x)$
35	72
60	92
72	60
92	35

$$\frac{g(60) - g(35)}{60 - 35} = \frac{92 - 72}{60 - 35} = \frac{20}{25}$$

The greatest common factor of 20 and 25 is 5. Divide numerator and denominator by the greatest common factor.

$$\text{AROC} = \frac{4}{5}$$